

An American Species of *Stegnogramma*

KUNIO IWATSUKI

In my recent revision of the genus *Stegnogramma* s. lat., (Iwatsuki, 1963), I enumerated eleven species from the Old World and stated that the species of the New World were doubtfully included within my concept of that genus. After publication of that paper, C. V. Morton kindly offered me an opportunity to examine several American specimens having linear or oblong, exindusiate sori. Examining these specimens, I concluded that *Gymnogramma pilosa* Mart. & Gal. may better be considered an American representative of the genus *Stegnogramma*, and a new combination is proposed, as follows:

STEGNOGRAMMA *pilosa* (Mart. & Gal.) Iwatsuki, *comb. nov.*

Gymnogramma pilosa Mart. & Gal. Mém. Acad. Brux. **15**: 27, pl. 4, fig. 1. 1842; Liebmann, Vid. Selsk. Skr. V. **1**: 181. 1848.

Dryopteris pilosa (Mart. & Gal.) C. Chr., Ind. Fil. 284. 1905; Monogr. Dryopteris I. 196. 1913.

Thelypteris pilosa (Mart. & Gal.) Crawford, Amer. Fern Jour. **41**: 16. 1951.

Stegnogramma pilosa is most closely related to the wide-ranging *S. pozoi*, from which it is distinguished by the slightly yellowish color and the gradually narrowing lower portion of the frond. Pinnules are closer together in *S. pilosa* than in *S. pozoi*, though the hairs are not so densely crowded in the former species as in the latter. *Hinton 3467* (US) is peculiar in having glandular rather than setose hairs on the sporangia, and with very long hairs on the rachis sometimes exceeding 2 mm.

Stegnogramma pilosa is classified into three distinct varieties, vars. *pilosa*, *major*, and *alabamensis*. The known range of the species is from Mexico to Guatemala, var. *alabamensis* extending into Alabama. Among these three varieties, var. *major* seems to be the closest ally of *S. pozoi*. Transfer of *Gymnogramma pilosa* to *Stegnogramma* necessitates new combinations for the two varieties.

STEGNOGRAMMA *PILOSA* (Mart. & Gal.) Iwatsuki var. **major** (Fourn.) Iwatsuki, *comb. nov.*

Gymnogramme pilosa var. *major* Fourn., Mex. Pl. 1: 73. 1872.

Thelypteris pilosa var. *major* Crawford, Amer. Fern Jour. 41: 19. 1951.

STEGNOGRAMMA PILOSA (Mart. & Gal.) Iwatsuki var. *alabamensis* (Crawford) Iwatsuki, *comb. nov.*

Thelypteris pilosa var. *alabamensis* Crawford, Amer. Fern Jour. 41: 19. 1951.

It is rather difficult to give the differences between *Stegnogramma* and *Thelypteris* in a few words. One of the most distinctive features between them is the structure of the sori. In *Stegnogramma*, the sori are linear or oblong, exindusiate, sometimes extending along the veins and reticulate, the sporangia being setiferous. Among the species of *Thelypteris*, there are a few which have linear sori, exindusiate sori, or setiferous sporangia. Compared with the vegetative characteristics, however, the soral features of *Stegnogramma* are distinct. As known in many other fern phylons, such a large genus as *Thelypteris* presents a wide range of variation even in the soral characteristics. Another important feature of *Stegnogramma* is seen in the trichomes. All axes as well as laminar surfaces are covered with two kinds of hairs, the longer hairs and the shorter ones. In *S. pilosa*, the soral characters and those of the trichomes are quite identical with the same characteristics of the Old World species of *Stegnogramma*. Above these, we can safely add several other features which clearly indicate the generic status of this species, such as the constitution of fronds, especially the basal condition of lateral pinnae, the texture and color when dried.

Christensen (1913) included in his Sect. *Leptogramma* two other species, *Dryopteris dasyphylla* and *D. polypodioides*. I have not examined the former; this is a species described from cultivated material, the native locality being doubtful. The latter species has the same soral construction as that of *Stegnogramma*, but is distinct from this genus by features found in the trichomes, constitution of fronds, venation, texture, and so on. Except for the form of sori, *D. polypodioides* belongs to *Thelypteris*. In the frond form and texture, this

species resembles such Old World species as the group of *T. crassifolia*.

There are a few other American species having linear, exindusiate sori. *Dryopteris ptarmica* var. *asplenioides* has such soral structure, although the type variety is distinct in having round sori with reniform indusia. The sori of *Thelypteris linkiana*, *T. gracilis*, *T. atrovirens* and others are also oblong and naked. The elongation of sori in the thelypteroid series is discussed critically in my recent paper on the morphology of that series (Iwatsuki, in ed.).

I wish to express my sincere thanks to C. V. Morton, whose kindness made possible this study.

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DEPARTMENT OF BOTANY, FACULTY OF SCIENCE, KYOTO UNIVERSITY, KYOTO, JAPAN.

Some New Name-combinations for Southeastern Ferns

EDGAR T. WHERRY

While several popular guides to the ferns of the northeastern states are available, the only broad treatment of those occurring farther south is Small's *Ferns of the Southeastern States*, which was published in 1938 and has long been out of print. The writer has accordingly undertaken to fill this need, and a book, *Southern Fern Guide*, is to be published soon. In its preparation several new name-combinations proved desirable. These are tabulated on page 346 of the book, but to render them fully valid, they are published herewith, accompanied by more extensive literature citations and discussion.